

### REMARKS

The Applicants hereby petition for a three month extension of time to file their response/amendment to the Office Action dated June 30, 2004, today's date being December 23, 2004 and the requisite fee of \$1,020.00 is attached herewith.

Reconsideration and allowance of the above-identified application is respectfully requested. The Applicants request that the Examiner determine whether the drawings filed on March 17, 2004 are acceptable or are objected to, since this is not indicated in the check boxes in the Office Action. Claims 1, 3-13, and 15-21 remain pending. Claims 2 and 14 have been cancelled. Claim 1 has been amended to incorporate the features of dependent claim 2, independent claim 13 has been amended to incorporate the features of dependent claim 14, and independent claim 20 has been amended to better define an embodiment of the present invention.

Claims 1, 2, 4, 5, 7, 8, 13-15, 19 and 20 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,158,269 to Dorenkott et al. (Dorenkott). Claims 3, 6, 11, 12, and 16-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Dorenkott. These rejections are respectfully traversed.

Specifically, the Applicants respectfully submit that Dorenkott fails to teach or suggest the specific features of the embodiments of the present invention for a system and method for verifying the integrity of the condition and operation of a pipetter device for manipulating fluid samples.

In particular, the Applicants submit that Dorenkott fails to teach or suggest all of the features recited in independent claims 1, 7, 13, and 20, including the features of determining that an acquired pipette tip is defective if said air pressure remains substantially constant during acquisition of said acquired pipette tip, ascertaining the

acquired pipette tip's condition based on the rate of change in air pressure after the maximum air pressure was reached, a processor adapted to determine that an acquired pipette tip is defective if said air pressure remains substantially constant during acquisition of said acquired pipette tip, and a processor for ascertaining that the pipette tip has entered the fluid holding container when said change in air pressure is detected.

Rather, Dorenkott merely discloses determining the pressure in a nozzle upon acquisition of a probe tip, ascertaining when a probe tip is coupled to a sample probe at a tip loader, and further determining when a sample probe tip is occluded by an obstruction during an aspirate or dispense operation.

These rejections will now be discussed in more detail.

#### **DISCUSSION OF THE REJECTIONS UNDER 35 U.S.C. §102(b)**

Turning now to the §102(b) rejections, Dorenkott discloses a method and apparatus for aspirating and dispensing a sample fluid. The apparatus includes a dilutor having a port coupled to a first port of a flow-through pressure transducer and to a bleed valve. A second port of the flow through pressure transducer is coupled to a first port of a sample probe. The flow-through pressure transducer provides transducer signals to a detector circuit. In response to the transducer signals provided thereto, the detector detects the occurrence or non-occurrence of a plurality of different events. The dilutor is operational to aspirate and dispense fluids such as air or liquid samples in order to provide accurate aspiration and dispensation of a sample fluid.

The method disclosed in the Dorenkott patent includes the steps of first aspirating a predetermined amount of air with the dilutor, dispensing air while moving the sample probe toward the fluid sample, measuring the pressure in the probe and using this

pressure value as a baseline, and monitoring the pressure and detecting when the pressure changes, which is indicative of the probe entering the fluid sample. The method of Dorenkott further includes bleeding the pressure into the atmosphere while returning the dilutor to its home position, aspirating a predetermined amount of fluid to remove dilutor backlash, waiting a predetermined amount of time to finish bleeding the system, and then aspirating the fluid sample with the dilutor.

Regarding the 35 U.S.C. §102(b) rejections, it is well known that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Respectfully, the Applicants submit that Dorenkott does not teach or suggest each and every claimed feature of independent claim 1, as amended. Claim 1 includes the feature of “determining that an acquired pipette tip is defective if said air pressure remains substantially constant during acquisition of said acquired pipette tip.” Respectfully, the Applicants submit that Dorenkott does not teach or suggest the claimed feature of determining that an acquired pipette tip is defective if said air pressure remains substantially constant during acquisition of said acquired pipette tip.

The Office Action cites column 2, lines 65-67, column 3, lines 1-5 and column 78, lines 1-4 of Dorenkott as disclosing the claimed feature of determining that an acquired pipette tip is defective if said air pressure remains substantially constant during acquisition of said acquired pipette tip. The Office Action states that “Dorenkott et al.’s method of detecting when a leak exist[s] by determining that there is no pressure rise is equivalent to detecting that the probe tip is defective when the pressure remains constant upon acquiring the pipette tip.” Respectfully, the Applicants disagree. The cited sections from Dorenkott refer to determining whether there is a pressure leak “*in the fluid path*

between the sample probe 102 and connecting member 82” (Dorenkott, column 6, lines 64-65, emphasis added). Further, the method for determining whether there is a pressure leak in the fluid path requires that “[t]he distal end of probe tip 108a of the probe tip 108 *is occluded* and the pump 70a is left on” (Dorenkott, column 6, lines 63-64, emphasis added). The method cited by the Office Action cannot be used to determine that an acquired pipette tip is defective because it requires that a known “defective” (i.e., occluded) tip be used. The Applicants respectfully submit that the disclosed features of Dorenkott of determining whether there is a pressure leak in the fluid path between the sample probe 102 and connecting member 82 is not the same as determining that an acquired pipette tip is defective if said air pressure remains substantially constant during acquisition of said acquired pipette tip. Therefore, since Dorenkott does not teach or suggest every claimed feature of claim 1, Dorenkott cannot anticipate claim 1 of the present invention, and it is respectfully suggested that this rejection be withdrawn.

Furthermore, regarding claims 3 through 6, the Applicants respectfully submit that since it has been shown that Dorenkott does not teach or suggest all of the features of amended claim 1, and since claims 3 through 6 depend from claim 1, the rejection of claims 3 through 6 under 35 U.S.C. §102(b) should be withdrawn.

Respectfully, the Applicants submit that Dorenkott does not teach or suggest each and every claimed feature of independent claim 7. Claim 7 includes the feature of “ascertaining the acquired pipette tip’s condition based on the rate of change in air pressure after the maximum air pressure was reached.” Respectfully, the Applicants submit that Dorenkott does not teach or suggest the claimed feature of ascertaining the acquired pipette tip’s condition based on the rate of change in air pressure after the maximum air pressure was reached.

The Office Action cites column 6, lines 63-67 of Dorenkott as disclosing the claim feature of ascertaining the acquired pipette tip's condition based on the rate of change in air pressure after the maximum air pressure was reached. The Office Action states that "Dorenkott et al. discloses that the distal end (108) of a pipette tip (e.g. probe tip 108) is occluded and the pump is left on. The pressure in the probe (102) is allowed to [reach] a predetermined limit during a calibration routine (col. 6, lines 63-67). Dorenkott et al. further discloses that a detector circuit that detects when a pipette tip (e.g., probe tip 108) is loaded or removed by an increase in pressure when the smaller tip opening is placed over the sample probe (102) (col. 3, lines 1-5)." Assuming, *arguendo*, that Dorenkott discloses what the Office Action proposes, it is respectfully submitted that nothing in the aforementioned statement, nor the cited sections of Dorenkott, teach or suggest the claimed feature of ascertaining the acquired pipette tip's condition based on the rate of change in air pressure after the maximum air pressure was reached, nor even of ascertaining a rate of change of air pressure. Therefore, since every feature of claim 7 has not been taught or suggested by Dorenkott, Dorenkott cannot anticipate claim 7 of the present invention, and it is respectfully suggested that this rejection be withdrawn.

Regarding claims 8 through 10, the Applicants respectfully submit that since it has been shown that Dorenkott does not teach or suggest the claimed feature of ascertaining the acquired pipette tip's condition based on the rate of change in air pressure after the maximum air pressure is reached, and also that Dorenkott does not teach or suggest even ascertaining a rate of change of air pressure, then Dorenkott cannot teach or suggest the features of the present invention described in dependent claims 8 through 10.

Furthermore, regarding claims 8 through 10, the Applicants respectfully submit that since it has been shown that Dorenkott does not teach or suggest all of the features of claim 7, and since claims 8 through 10 depend from claim 7, the rejection of claims 7 through 10 under 35 U.S.C. §102(b) should be withdrawn.

Regarding claims 13, 15 and 16, the Applicants respectfully submit that the discussion above in regard to claims 1 through 6 apply as well to claims 13, 15 and 16. Therefore, since Dorenkott does not teach or suggest every claimed feature of claim 13, Dorenkott cannot anticipate claim 13 of the present invention, and it is respectfully suggested that this rejection be withdrawn. Furthermore, regarding claims 15 and 16, the Applicants respectfully submit that since it has been shown that Dorenkott does not teach or suggest all of the features of claim 13, and since claims 15 and 16 depend from claim 13, the rejection of claims 15 and 16 under 35 U.S.C. §102(b) should be withdrawn.

Respectfully, the Applicants submit that Dorenkott does not teach or suggest each and every claimed feature of independent claim 19. Claim 19 includes the feature of “moving the pipette tip toward the liquid in the container *without aspirating* through said pipette tip while detecting for a change in air pressure in said pipette tip.” Respectfully, the Applicants submit that Dorenkott does not teach or suggest the claimed feature of moving the pipette tip toward the liquid in the container without aspirating through said pipette tip while detecting for a change in air pressure in said pipette tip.

The Office Action cites column 2, lines 35-45 of Dorenkott as disclosing the claim feature of moving the pipette tip toward the liquid in the container without aspirating through said pipette tip while detecting for a change in air pressure in said pipette tip. The Office Action states that “Dorenkott et al. disclose[s] that while in a surface detection mode, the probe (102) is lowered; and once the probe tip reaches the surface of the liquid, the pressure transducer (98) senses the change in air pressure.” Respectfully, the Applicants note that Dorenkott also discloses that “[i]n a surface detection mode of operation, *the air source provides a constant air flow through the pressure transducer and the sample probe and probe tip* while the sample probe is being lowered toward a surface of a fluid.” Dorenkott, column 2, lines 35-38 (emphasis added).

The embodiment of the present invention as claimed in independent claim 19 includes the claim feature of moving the pipette tip toward the liquid in the container *without aspirating* through said pipette tip while detecting for a change in air pressure in said pipette tip. Dorenkott relies on an air flow in determining that the probe tip has entered surface of the fluid: the present invention does not, and is therefore not anticipated by Dorenkott. Therefore, since Dorenkott does not teach or suggest every feature of claim 19, Dorenkott cannot anticipate claim 19 of the present invention, and it is respectfully suggested that this rejection be withdrawn.

Respectfully, the Applicants submit that Dorenkott does not teach or suggest each and every claimed feature of amended independent claim 20. Claim 20 includes the feature of “a pressure transducer, adapted to measure a change in air pressure in the nozzle as the pipette tip is inserted into the fluid holding container *without aspirating through said pipette tip.*” Respectfully, the Applicants submit that Dorenkott does not teach or suggest the claimed feature of a pressure transducer, adapted to measure a change in air pressure in the nozzle as the pipette tip is inserted into the fluid holding container while the pipette tip is not being aspirated.

Regarding claims 20 and 21, the Applicants respectfully submit that the discussion above in regard to claim 19 applies as well to claims 20 and 21. Therefore, since Dorenkott does not teach or suggest every claimed feature of claim 20, Dorenkott cannot anticipate claim 20 of the present invention, and it is respectfully suggested that this rejection be withdrawn. Furthermore, regarding claim 21, the Applicants respectfully submit that since it has been shown that Dorenkott does not teach or suggest all of the claimed features of claim 20, and since claim 21 depends from claim 20, the rejection of claim 21 under 35 U.S.C. §102(b) should be withdrawn.

**DISCUSSION OF THE REJECTIONS UNDER 35 U.S.C. §103(a)**

Turning now to the §103(a) rejections, the Office Action asserts that claims 3, 6, 11, 12, and 16-18 are unpatentable over Dorenkott under 35 U.S.C. §103(a). As discussed above, however, the Applicants respectfully submit that Dorenkott does not teach nor suggest all of the claimed features of claim 1, from which claims 3 and 6 depend. Also, the Applicants respectfully submit that Dorenkott does not teach nor suggest all the claimed features of claim 13, from which claim 16 depends. Therefore, it is respectfully requested that the rejection under 35 U.S.C. §103(a) of claims 3, 6 and 16 under Dorenkott be withdrawn.

In regard to rejections made under 35 U.S.C. §103(a), it is well known that to establish a *prima facie* case of obviousness, the prior art must disclose or suggest all of the limitations of the claims. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). In support of the rejection of claims 11 and 12 under 35 U.S.C. §103(a), the Office Action cites column 3, lines 1-5 of Dorenkott as disclosing the detection of a sample probe tip being coupled to the sample probe by the increase in pressure when the smaller tip opening is placed over the sample probe, and states that this renders obvious the Applicants' invention as claimed in claim 11. Respectfully, the Applicants disagree. As noted above, all the elements of a claim must be disclosed or suggested in the prior art. The cited portion of Dorenkott does not disclose or suggest all the features of the Applicants' claim 11. The method discussed in the cited portion of Dorenkott refers to the *acquisition* of a sample probe tip: not to a determination of when it has been ejected. Acquisition and ejection are completely different operations. Dorenkott does not teach or suggest an ejection assembly. The Office Action states that "the [sic] each event of the detector circuit (128) provides an output signal to the controller (94)." That the detector circuit can provide an output signal is dispositive of nothing. Dorenkott does not disclose the action of ejection nor include the means of ejection.



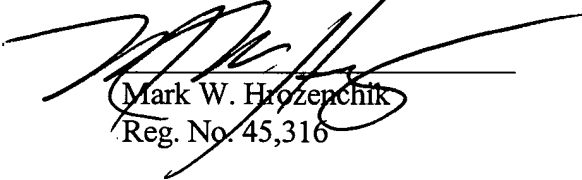
The Office Action then further states that “Dorenkott et al can easily manipulate the controller (94) to discard the defective tip as well.” Respectfully, this is impermissible hindsight reasoning. The law clearly states that all the elements of a claim must be disclosed or suggested in the prior art, and that “some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead [an]individual to combine the relevant teachings of the references.” *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Further, “[t]he motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved.” *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). The showing must be “clear and particular, and it must be supported by actual evidence.” *Teleflex, Inc. v. Ficosa North American Corp.*, 299 F.3d 1313, 1334, 63 U.S.P.Q.2d 1374, 1387 (Fed. Cir. 2002) (quoting *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999)). It is not sufficient to rely on “common sense and common knowledge;” there must be specific evidence to support the motivation. See *In re Lee*, 277 F.3d. 1338, 1344-45, 61 U.S.P.Q.2d 1430, 1434-35 (Fed. Cir. 2002). Respectfully, the Applicants submit that the Office Action has not made the requisite showing of obviousness as required, and that all of the elements of the Applicants’ claim 11 have not been taught or suggested. Therefore, the Applicants respectfully submit that the teachings of Dorenkott do not render claims 11 and 12 obvious under 35 U.S.C. §103(a), and that the rejection should therefore be withdrawn.

For all the reasons discussed above with respect to Dorenkott, the Applicants respectfully submit that the teachings of Dorenkott do not anticipate claims 1, 2, 4, 5, 7, 8, 13-15, 19, and 20. Further, the Applicants respectfully submit that the teachings of Dorenkott do not render the invention as recited in claims 3, 6, 11, 12, and 16-18 obvious to one skilled in the art. Accordingly, the Applicants respectfully request that the Examiner withdraw all of the outstanding prior art rejections.

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Amdt. Dated December 23, 2004  
Reply to Office Action of June 30, 2004

In view of the above, it is believed that the application is in condition for allowance and notice to this effect is respectfully requested. Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the telephone number indicated below.

Respectfully submitted,



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